

WHAT IS CLAIMED IS:

1. A security system for use with an ATM, said ATM being connected to and cooperating with an ATM network for processing a transaction initiated at the ATM by a person, said processing including the transfer of transaction information
5 between the ATM and the ATM network, said system comprising:

imaging means for capturing at least one image of said person;

image storage means for storing said at least one image in a digital format at said ATM; and

means for transferring said images, represented in said digital format, from said
10 imaging means to said image storage means for storage as image data and from said imaging means to at least one remote location in at least one predetermined way wherein the images are viewable at the remote location.

2. The security system of Claim 1, wherein:

said imaging means captures said at least one image as electrical pixel signals
15 and wherein said system includes means for initiating the capture of said image;

3. The security system of Claim 1, said system further comprising:

means for detecting the processing of said transaction initiated at the ATM by said person and, responsive to the detection of said processing, causing said imaging means to capture said image.

20 4. The security system of Claim 3, said processing detection means including:

means for obtaining said transaction information and for providing certain portions of said transaction information to said image transfer means for transfer to the image storage means and storage thereby in association with the image data.

25 5. The security system of Claim 4, wherein:

said transfer means transfers said image data from said image storage means to said remote location in said predetermined way by transferring each image along with any transaction information stored in association with that image.

6. The security system of Claim 4, said image storage means including:

30 means for storing said transaction information as transaction data separate from said image data in a way which correlates the transaction data with its associated image

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data and which permits the transaction data to be searched without searching the image data such that by locating a particular portion of transaction data, its associated image data is identified and directly retrievable.

7. The security system of Claim 6, wherein:

5 said image data is stored in an image file and said means for storing said transaction data stores the transaction data in a transaction file on said image storage means.

8. The security system of Claim 7, wherein:

10 said image file and said transaction file are each named in a predetermined way which correlates the files with one another.

9. The security system of Claim 8, wherein:

 said image and transaction files are named in said predetermined way by said image file name including a file extension indicative of an image file and said transaction file name including a different file extension indicative of a transaction file.

15 10. The security system of Claim 8, wherein:

 said image and transaction files are named in said predetermined way by including, as at least a part of each name, the date and time at which the image stored in the image file was captured.

20 11. The security system of Claim 4, said transaction information detection means including:

 means for identifying specific preselected data which may form part of the transaction data associated with a particular transaction and responsive to the identification of said specific preselected data for, thereafter, cooperating with said transfer means to transfer one or more images captured in association with said particular transaction to said remote location in said predetermined way such that the
25 images are viewable at the remote location.

12. The security system of Claim 11, wherein:

 said specific preselected data includes an account number selected from an overall list of account numbers.

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13. The security system of Claim 11, wherein:

said preselected data includes a transaction amount which is greater than a threshold amount and wherein said means for identifying said specific preselected data includes means for identifying a transaction amount which is greater than said threshold amount, and, upon identification of a transaction amount which is greater than said threshold amount, said identification means cooperates with said transfer means to transfer said one or more images in said predetermined way.

14. The security system of Claim 11, said image transfer means including: means for transferring images in said predetermined way by communicating with the remote location via telephone.

15. The security system of Claim 4, said image transfer means including: means for providing random access to said transaction information and said image data from said remote location such that the transaction information and the images are searchable from and viewable at the remote location.

16. The security system of Claim 15, said random access means including: means for transferring selected ones of said images and associated transaction information in said predetermined way to said remote location based upon searching the transaction information and the image data.

17. The security system of Claim 15, said means for providing random access from the remote location including:

means for providing a two-way communication link between the remote location and the ATM via telephone such that the remote location can call the ATM and, upon connection thereto, search and/or view said transaction information and said image data.

18. The security system of Claim 15, said means for providing random access to the transaction information and associated images including:

search means for searching said transaction information for preselected data, selecting certain ones of said images based on said preselected data and, thereafter, providing said certain images to the image transfer means for transfer to the remote location in said predetermined way.

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19. The security system of Claim 1, said means for transferring images in said predetermined way including:

means for transmitting said images to said remote location via a telephone line such that transaction processing between the ATM and the ATM network are not
5 impeded.

20. The security system of Claim 1, said image storage means including:
a fixed disk.

21. The security system of Claim 1, said means for transferring images in said predetermined way including:

10 (i) removable storage means, (ii) means for transferring images initially captured by said imaging means to said removable storage means for storage thereby such that the removable storage means can be removed at the ATM and transported to said remote location and (iii) means positioned at the remote location for viewing images stored in said removable storage means.

15 22. The security system of Claim 21, said removable storage means including:

a removable fixed disk.

23. The security system of Claim 21, wherein:
said image storage means stores the captured image including a date and a time
20 at which the transaction associated with that image was initiated

24. The security system of Claim 21, wherein:
said means for transferring images to said removable storage means is configured so as to transfer captured images from the imaging means to the removable storage means.

25 25. The security system of Claim 21, wherein:
said means for transferring images to said removable storage means is configured so as to transfer captured images from the image storage means to the removable storage means.

26. The security system of Claim 21, wherein:
30 said removable image storage means stores said transaction information associated with each image stored thereby.

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27. The security system of Claim 21, wherein:

said viewing means is configured to cooperate with said removable storage means in a way which provides for random access to the images stored in said removable storage means when the removable storage means is positioned at the remote location.

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28. The security system of Claim 21, wherein:

said capture initiation means includes means for detecting the processing of said transaction initiated at the ATM by said person and, responsive to the detection of said processing, causes said imaging means to capture said image, said processing detection means including means for obtaining said transaction information and for providing certain portions of said transaction information to said image transfer means for transfer to the removable storage means and storage thereby in association with the image data.

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29. The security system of Claim 21, said removable storage means including:

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means for storing said transaction information as transaction data separate from said image data in a way which permits the transaction data to be searched without searching the image data.

30. The security system of Claim 29, wherein:

said image data is stored in an image file on said removable storage means and said means for storing said transaction data stores the transaction data in a transaction file on said removable storage means.

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31. The security system of Claim 30, wherein:

said image file and said transaction file are each named in a predetermined way which associates the files with one another.

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32. The security system of Claim 31, wherein:

said image and transaction files are named in said predetermined way by said image file name including a file extension indicative of an image file and said transaction file name including a different file extension indicative of an image file.

33. The security system of Claim 32, wherein:

said image and transaction files are named in said predetermined way by said names each including, as at least a part of each respective name, the date and time at which the image stored in the image file was captured.

5 34. The security system of Claim 21, wherein:

said removable storage means is capable of storing a predetermined number of images and, once said predetermined number of images have been stored by said removable storage means, said transfer means sequentially overwrites the oldest stored image with a new image.

10 35. The security system of Claim 1, further comprising:

means for responding to at least one input signal.

36. The security system of Claim 35, wherein:

said input signal response means initiates the capture of at least one image by said imaging means upon receipt of said input signal.

15 37. The security system of Claim 35, said means for responding to said input signal including:

at least one additional imaging means for capturing at least one event image of a security zone associated with said ATM upon receipt of said input signal, said event image, thereafter, being transferred to said image storage means and to said remote location in said predetermined way.

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38. The security system of Claim 37, wherein:

said input signal is provided by a contact closure which is closed responsive to an unauthorized intrusion of said security zone.

39. The security system of Claim 37, wherein:

25 said input signal is provided by a motion detector which is actuated responsive to an unauthorized intrusion of said security zone.

40. The security system of Claim 35, further comprising:

an alarm section including at least one additional imaging means for capturing at least one event image of a security zone associated with said ATM, said event image, thereafter, being transferred to said image storage means and to said remote location

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in said predetermined way, said alarm section being configured for selective activation by said input signal.

41. The security system of Claim 40, further comprising:

5 means for generating said input signal from said remote location whereby to remotely arm or disarm said alarm section.

42. The security system of Claim 35, further comprising:

means for providing an output indication wherein said output indication is provided responsive to said input signal.

43. The security system of Claim 42, further comprising:

10 an alarm bell positioned at said ATM wherein said output indication actuates said alarm bell.

44. The security system of Claim 1, further comprising:

means for monitoring at least one element of said system and for providing at least one output indication responsive to said monitoring.

15 45. The security system of Claim 44, wherein:

said monitoring means is configured for providing said output indication at the remote location.

46. The security system of Claim 44, wherein:

said monitoring means is configured for providing said indication at the ATM.

20 47. The security system of Claim 44, wherein:

said element is the image storage means which itself includes a predetermined capacity for image storage and wherein said output indication is provided responsive to the image storage means being filled to said predetermined capacity.

48. The security system of Claim 44, said output indication means including:

25 an indicator light and means for causing the indicator light to illuminate when the image storage means has been filled.

49. The security system of Claim 44, said transfer means including:

removable storage means for storing captured images at the ATM, said removable storage means being configured for removal and transport to said remote location upon storage thereby of a predetermined number of images wherein the

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monitored element is the removable storage means and said output indication is provided once said removable storage means reaches said predetermined capacity.

50. The security system of Claim 44, further comprising:

remote locking means at said ATM wherein said output indication is used to
5 actuate said remote locking means so as to selectively preclude access to a predetermined portion of said ATM.

51. A security system for use with an ATM, said ATM being connected to and cooperating with an ATM network for processing a transaction initiated at the ATM by a person, said processing including the transfer of transaction information
10 between the ATM and the ATM network, said system comprising:

imaging means for capturing at least one image of said person;

conversion means for converting said captured image to a first array of digital image data;

compression means for compressing said first array of digital image data into
15 a second array of digital image data;

means for initiating the capture of said image;

image storage means for storing said second array of digital image data corresponding to said captured images at said ATM; and

means for transferring said image, represented by said second array of digital
20 image data, from said imaging means to said image storage means for storage as image data and from said imaging means to at least one remote location in at least one predetermined way wherein the images are viewable at the remote location.

52. The security system of Claim 51, wherein:

said compression means includes memory for storing said first and second
25 arrays.

53. The security system of Claim 51, wherein:

said compression means includes a differential pulse-code modulation algorithm.

54. The security system of Claim 51, wherein:

said imaging means provides a plurality of image resolutions; and

30 said compression means includes a compression algorithm adapted to said plurality of image resolutions.

55. The security system of Claim 51, wherein:

said imaging means provides a plurality of image resolutions; and

said compression means includes a differential pulse-code modulation algorithm adapted to said plurality of image resolutions.

5 56. A security system for use with an ATM, said ATM being connected to and cooperating with an ATM network for processing a transaction initiated at the ATM by a person, said processing including the transfer of transaction information between the ATM and the ATM network, said system comprising:

imaging means for capturing a series of images of said person;

10 means for selecting certain ones of said images for conversion to a digital image format and for performing said conversion so as to provide digitized images corresponding to the selected images;

image storage means for storing said digitized images at said ATM; and

15 means for transferring said selected images, represented in digital form, from said imaging means to said image storage means for storage as image data and from said imaging means to at least one remote location in at least one predetermined way wherein the images are viewable at the remote location.

57. The security system of Claim 56, said system further comprising:

20 means for detecting the processing of said transaction initiated at the ATM by said person and, responsive to the detection of said processing, causing said selecting means to capture said selected images.

58. The security system of Claim 57, said processing detection means including:

25 means for obtaining said transaction information and for providing certain portions of said transaction information to said image transfer means for transfer to the image storage means and storage thereby in association with the selected images.

59. The security system of Claim 58, wherein:

30 said transfer means transfers said digitized images from said image storage means to said remote location in said predetermined way by transferring each selected image along with any transaction information stored in association with that image.

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60. The security system of Claim 58, said image storage means further comprising:

indexing means for locating any of the stored transaction information and associated selected images, said indexing means includes a predetermined portion of said transaction information.

61. The security system of Claim 60, wherein:

said transaction information and said selected images are stored including a plurality of time stamps which are uniquely indicative of the time at which each of the selected images were captured and wherein said predetermined portion of the transaction information includes said plurality of time stamps.

62. The security system of Claim 61, wherein:

said transaction information and said selected information are stored in a data file and wherein said index file further includes a plurality of offsets which correspond one for one to said time stamps and which indicate a specific location for each of the time stamps within the data file.

63. The security system of Claim 62, wherein:

said index file and said data file are configured for storing images collected during one day of system operation.

64. The security system of Claim 56, said imaging means further comprising:

means for capturing at least one surveillance image of a security zone associated with said ATM, said surveillance image, thereafter, being converted to digital form and transferred to said image storage means and to said remote location in said predetermined way.